

REMARKS/ARGUMENTS

Entry of this response and reconsideration and allowance of the above-identified patent application are respectfully requested.

No claims have been amended, canceled or added.

Applicant, thus, respectfully requests consideration of the following remarks.

Claims 1, 4, 6, 14-18, 20-24, 27-29, 33-39, 43-46, and 50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,282,405 to Brown ("Brown1") in view of U.S. Pat. No. 7,203,185 to Dhara et al. ("Dhara"), U.S. Pat. No. 6,643,566 to Lehr et al. ("Lehr"), and U.S. Pat. No. 5,949,327 to Brown ("Brown2"). Claims 3 and 41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown1, Dhara, Lehr, Brown2, and U.S. Pat. No. 6,577,414 to Feldman et al. ("Feldman").

Claims 1, 3, 4, 6, 14-18, 20-24, 27-29, 33-39, 41, 43-46 and 50 stand rejected under 35 U.S.C., first paragraph, as failing to comply with the written description requirement.

Briefly, the present invention forms a part of communications system and, in one embodiment, may include a fiber optic interface device configured to provide communications over a fiber optic network and a power line. In one embodiment the fiber optic interface device may include a modem, a fiber optic transceiver, and a router. In addition, the fiber optic interface device may be communicatively coupled to a transformer bypass device.

112 Rejections

The office action asserts that independent claims 1, 20, and 36 fail to comply with the written description requirement and the enablement requirement. Specifically, the office action asserts that the claimed subject matter is not supported by adequate written description and in particular, the limitation of "a router in communication with the fiber optic transceiver and the modem" was not original described in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant respectfully refutes this rejection. Originally filed claims form part of the specification.

- Originally filed claim 19 claims "routing data."
- Originally filed claim 25 claims wherein the converter comprises a router.
- At page 11, line 2 "fiber optic interface may function as a router..."
- At page 11, lines 15-16, "Fiber optic interface operates to modify and route signals as required."
- In addition, page 15, line 15 states, "Fiber optic interface device 203 also may have certain router functionality"
- Page 15, lines 18-19 states, "fiber optic interface device 203 may identify certain data headers and a forwarding table to determine to which customer premise the data should be transmitted."

Thus, routing data and a router are fully disclosed in the specification.

The office action also states that "Instant specification does not teach using a transformer bypass device together with a router" This statement seems irrelevant to claims 20 and 36 for which this rejection is put forth (in addition to claim 1), which do not claim a transformer bypass device. Nevertheless, Figure 6 depicts the fiber optic interface device 203 (which may perform routing) and the power line bridge 301 (a transformer bypass device).

The above argument was previously presented and not addressed by the Examiner. Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 USC § 112, first paragraph because the application as filed discloses the router in communication with the fiber optic transceiver and the modem and in a manner to allow one skilled in the art to make and use the invention.

The office action (page 2) also states that the specification does not support the claim element "a third interface port configured to communicate data signals over a

medium voltage power line of the electric power system." However, the claim element is fully supported by the specification. For example, Figure 6 illustrates an example apparatus at the distribution transformer site 304 that comprises the fiber optic interface device 203 and power line bridge 301. A first port (extending from fiber optic interface device 203) is connected to the fiber optic network 202. A second port (extending from power line bridge 301) is connected to the low voltage power line 113. A third port (extending from power line bridge 301) is connected to the distribution line 120 (which is an MV power line).

Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 USC § 112, first paragraph.

Prior Rejections

Independent claims 1, 20 and 36

Independent claim 1, 20 and 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown1, Dhara, Lehr, and Brown2. Briefly, the present invention may comprise a device that includes a fiber optic transceiver and a router and may include three ports. A first port is for communicating over a medium voltage power line, a second port is for communicating over a low voltage power line, and a third port is for communicating over a fiber optic data network.

Independent claims 1, 20, and 36

Fiber optic transceiver

Brown1 fails to disclose a fiber optic transceiver as claimed. The components shown Figure 13 comprise a coaxial/fibre interface unit 138 and an amplifier (e.g. a broadband amplifier) 140. Col. 8, lines 52-57. Applicant submits that these components form an electro-optical converter and not a transceiver as claimed.

Router

All of the independent claims require routing data to one of a plurality of communication devices located in one of a plurality of customer premises. The office

action relies on Dhara for such disclosure. However, router 124 shown in Figure 1 of Dhara is connected to the Internet and CMTS 120. There is no disclosure in Dhara of routing data to data to one of a plurality of communication devices located in one of a plurality of customer premises as required by the claims.

Lehr discloses distributing data throughout a building or campus, but also fails to disclose routing data over low voltage power lines to one of a plurality of customer premises. In addition, Lehr is in a different field of endeavor not related to power line communications. Furthermore, by sending power over data lines, Lehr teaches away from the claimed invention and other references directed to communicating over power lines.

Transformer Bypass Device

Claim 1 requires a transformer bypass device coupled to a medium voltage power line of the electric distribution power system and a low voltage power line of the electric power system. The office action relies on TX/RX unit 1310 of Figure 13 of Brown2 for disclosure of this claim element. However, it is clear from Figure 13 that TX/Rx unit 1310 is not coupled to the low voltage power line and, therefore, does not comprise a transformer bypass device as claimed.

Components co-located with distribution transformer

Claim 20 requires the first interface port, second interface port, third interface port, fiber optic transceiver, modem, and router be co-located with the distribution transformer. Claim 36 includes similar limitations. Claim 1 requires said receiving, said converting, said routing, and said transmitting be performed by components co-located with the distribution transformer.

The office action cites to TX/RX unit 1310 of Figure 13 for disclosure of all of the components at the distribution transformer. The TX/RX unit 1310 is shown schematically in figure 12 as component 1203 does not include a modem 1204, a router, or fiber optic transceiver. Thus, none of prior art references relied upon disclose the subject matter of this claim element.

Modem

The office action and states "Brown1 teaches in Figure 2 transceiver/modem between the network conditioning unit (corresponding to 136 of Figure 13) and optical network." Conditioning unit 136 comprises a low pass filter and a high pass filter as is indicated by the symbols of the figure (see also Figure 11b which includes labels). Thus, the arrangement of Figure 13 fails to disclose a modem. The arrangement of Figure 2 of Brown1 fails to disclose any fiber optic communications. Thus, the Examiner is inappropriately combining components from different embodiments of Brown1 (by combining the embodiments of Figures 2 and 13). In other words, Brown1 fails to disclose a modem in combination with a fiber optic transceiver as claimed.

Reasons to Combine

The office actions states that it would be obvious to co-locate the components "because putting the equipment housing close to the transformer shortens the wiring that carries hazardous voltage and reduces maintenance cost." Office Action at page 6. However, co-locating the components at the transformer does not shorten any wiring carrying hazardous voltages. Thus, the reason to combine the four prior art references is insufficient.

Under a recent Supreme Court holding (KSR), TSM (teaching/suggestion/motivation to combine) is only one of numerous methods allowing combination of references. However, under KSR there still must be a "**reason**" to combine the cited references. The Office Action, however, fails to state a valid reason to combine multiple references to reject many of the claims.

Applicant respectfully requests the Examiner provide a reason to combine the references that does not use hindsight to allow Applicant an opportunity to refute such reasoning.

Applicant submits that the need to combine four or more references demonstrates the non-obviousness of the claimed inventions and that the combination of elements is not taught by the cited prior art nor provides a predictable result.

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Various dependent claims also are not disclosed by the prior art of record.

In view of the foregoing, it is respectfully submitted that the claimed invention is patentably distinguished over the asserted prior art references and that the application stands in condition for allowance. It is respectfully requested that the application be reconsidered, that all pending claims be allowed, and that the application be passed to issue.

CONCLUSION

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact Mel Barnes at (410) 757-6643, to discuss any other changes deemed necessary in a telephonic interview.

Authorization is hereby granted to charge any deficiencies in fees, including any fees for extension of time under 37 C.F.R. §1.136(a), to Deposit Account 50-3970. Please credit any overpayment in fees to the same deposit account.

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